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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,186	11/05/2003	Heliang Liu	9896-000014	7525

27572 7590 10/17/2006

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EXAMINER
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PASCAL, LESLIE C

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/702,186

**Applicant(s)**

LIU ET AL.

**Examiner**

Leslie Pascal

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 3,6 and 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Please note that a new examiner is handling this case.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (6577424, of record).

There is confusing in the reference because he has two elements 314 and 316. Lin teaches two optical path selectors (305, 307) and *at least one* chirped fiber-grating unit (306, 308, 314, 316 (referring to the gratings labeled 314, 316) and also 314 (at the output of port 6) which he says may be a chirped fiber grating-column 6, lines 8-14) serially connected between *the appropriate* ports of the selectors. The connections claimed by the applicant are broad. For example, the gratings are connected to "appropriate" ports. The applicants claim that the input of the device is input to "one optical path selector" (305) which is connected to "another path selector" (307) and the "another path selector" output is the output of the device (the device is considered to be the first stage of the dispersion compensating means). The first stage could be used alone if only the first two wavelengths are to be compensated. In regard to the applicant's amendment to the claim with regard to the grating fiber unit "dispersion compensating", Lin teaches that the dispersion compensating means may be a dispersion grating. He also teaches that it is well known to use chirped gratings which have the same bandwidth that are "set oppositely" (306 and 308 are "set oppositely")

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gratings 314 and 316 but have the same wavelengths). Lin teaches the same elements connected in the same way that the applicant has them connected. The first stage of Lin is identical to the applicant's invention with the exception of element 314 which he says provides dispersion compensation. The examiner feels that the elements 306, 308, 314, 316 (referring to the gratings labeled 314, 316) act as dispersion compensation means since they are the same elements that the applicant has arranged in the same way. It would appear that the other element 314 provides additional compensation. In addition, he says that the second element 314 could be a Bragg grating that provides the dispersion compensation. It would have been obvious to arrange that Bragg grating oppositely since Lin teaches that this is how he arranges his Bragg gratings. The applicant argues that because there is an element 314 which he says provides dispersion compensation, the other Bragg gratings do not. This is not understood. How can elements which are disclosed as providing dispersion compensation by the reference and which are arranged in the same manner as the applicant, not obviously provide the compensation?

4. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Laming et al. (6,292,601 B1).

Regarding claims 4 and 7, Lin teaches all aspects of the invention, but does not teach that the gratings are written on a fiber segment. Laming discloses writing a chirped fiber grating on a fiber for optical dispersion compensation (col. 3, lines 36-58). One skilled in the art at the time of the invention would have been motivated to include

in Lin the method of writing of Laming in order to implement the fiber gratings in the fiber of Lin. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Lin the writing method of Laming.

5. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Epworth (6,271,952 B1).

With respect to claims 5 and 8, Lin teaches all aspects of the invention, but does not teach that two chirped grating fibers melted together. Epworth teaches two grating fibers melted together (col. 9, lines 17-21). One skilled in the art at the time of the invention would have been motivated to include in Lin the method of melting in Epworth in order to connect the two oppositely set fiber gratings of Lin.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Lin the melting method of Epworth.

4. Claims 3 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. In regard to the applicant's arguments that element 314 provides the dispersion compensation the other Bragg grating do not, Lin teaches the same elements connected in the same way that the applicant has them connected. The first stage of Lin is identical to the applicant's invention with the exception of element 314 which he says provides dispersion compensation. The examiner feels that the elements 306, 308, 314, 316 (referring to the gratings labeled 314, 316) act as dispersion compensation means since they are the same elements that the applicant has arranged

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in the same way. It would appear that the other element 314 provides additional compensation. In addition, he says that the second element 314 could be a Bragg grating that provides the dispersion compensation. The applicant argues that because there is an element 314 which he says provides dispersion compensation, the other Bragg gratings do not. This is not understood. How can elements which are disclosed as providing dispersion compensation by the reference and which are arranged in the same manner as the applicant, not obviously provide the compensation?

The connection of the elements in claim 1 is extremely broad. Claims 2 and 3 make the connections more definite.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Leslie Pascal  
Primary Examiner  
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